

CLAIMS

1. A server apparatus, connected via a network to an information processing terminal holding a terminal ID that cannot be re-written externally, that holds a program running on the information processing terminal, the server apparatus comprising:
 - 5 a table holding unit operable to hold a table indicating a relation between a previously distributed program and a terminal ID; and
 - 10 a decision unit operable to decide, by referring to the table, whether or not to distribute a program in response to a program obtainment request attached with the terminal ID, transmitted from the information processing terminal.
- 15 2. The server apparatus according to claim 1,
wherein the program includes a program body running on the information processing terminal and program specific information for running said program body, and
the decision unit decides i) to distribute only the program body to the information processing terminal by prohibiting
20 distribution of the program specific information in the case where the terminal ID attached to the program obtainment request is recorded in the table, and ii) to add the terminal ID and the program specific information, to the table, in a correspondence relation with each other, and distribute the program body and the program
25 specific information to the information processing terminal in the case where said terminal ID is not recorded in the table.
- 30 3. The server apparatus according to Claim 2,
wherein, in response to the program obtainment request from the information processing terminal, the decision unit decides to distribute the program body for each program obtainment request, and distribute the program specific information only once.

4. The server apparatus according to Claim 1,
wherein the table holding unit holds a table indicating the
terminal ID and a number of distributions of the program specific

5 information, and

the decision unit, by referring to the table, decides i) to
distribute only the program body to the information processing
terminal by prohibiting distribution of the program specific
information in the case where the number of distributions
10 corresponding to the terminal ID reaches a prescribed value, and ii)
to update the number of distributions corresponding to the terminal
ID, described in the table, and distribute the program body and the
program specific information to the information processing terminal,
in the case where the number of distributions corresponding to the
15 terminal ID does not reach the prescribed value, said terminal ID
being attached to the program obtainment request transmitted from
the information processing terminal.

5. The server apparatus according to Claim 4,

20 wherein the table holding unit holds a table indicating the
relation among the terminal ID attached to the program obtainment
request from the information processing terminal, a program body
ID for uniquely identifying the program body distributed to the
information processing terminal having said terminal ID, and the
25 number of distributions indicating the number of times the program
specific information has been distributed to the information
processing terminal having the terminal ID, and

the decision unit, referring to the table, decides i) to
distribute only the program body to the information processing
30 terminal by prohibiting distribution of the program specific
information in the case where the number of distributions,
corresponding to both the program ID and the terminal ID attached

to the program obtainment request transmitted from the information processing terminal, reaches the prescribed value, and
ii) to update the number of distributions corresponding to the terminal ID and the program ID, described in the table, and
5 distribute the program body and the program specific information to the information processing terminal, in the case where the number of distributions, corresponding to the program ID as well as the terminal ID attached to the program obtainment request transmitted from the information processing terminal, does not
10 reach the prescribed value.

6. The server apparatus according to one of Claim 4 and Claim 5, wherein the prescribed value is a value indicating the number of distributions for the program specific information to be
15 distributed from the server apparatus to the information processing terminal.

7. The server apparatus according to Claim 1, wherein a table holding unit holds a table indicating the
20 relation among the terminal ID attached to the program obtainment request from the information processing terminal, a program body ID for uniquely identifying the program body distributed to the information processing terminal having the terminal ID, and a program specific information ID for uniquely identifying the program
25 specific information distributed to the information processing terminal having the terminal ID, and

the decision unit, referring to the table, decides i) to distribute only the program body to the information processing terminal by prohibiting distribution of the program specific information in the case where the program specific information ID, corresponding to both the program ID and the terminal ID attached to the program obtainment request transmitted from the
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information processing terminal, is described in the table, and ii) to add the terminal ID, the program specific information ID, and the program ID, to the table, in a correspondence relation with each other, and distribute the program body and the program specific

5 information to the information processing terminal, in the case where the program specific information ID, corresponding to both the program ID and the terminal ID attached to the program obtainment request, is not described in the table.

10 8. The server apparatus according to Claim 2, holds a plurality of the program specific information which is information that is different for each of the information processing terminals, and one program body which is common for the information processing terminals.

15 9. The server apparatus according to Claim 2,
wherein the table holding unit holds a table indicating the relation between a program body ID for uniquely identifying the program body and the terminal ID of the information processing

20 terminal on which the program body runs, and
the decision unit, referring to the table, decides i) that the program body can be distributed in the case where the program ID and the terminal ID attached to the program obtainment request transmitted from the information processing terminal are in a correspondence relation in the table, and ii) that the program body cannot be distributed in the case where the program ID and the terminal ID attached to the program obtainment request transmitted from the information processing terminal are not in a correspondence relation in the table.

25 30 10. A program management system comprising an information processing terminal holding a terminal ID that cannot be re-written

externally, and a server apparatus, connected via a network to the information processing terminal, that holds a program running on the information processing terminal,

5 wherein the information processing terminal transmits, to the server apparatus, a program obtainment request attached with the terminal ID when requesting for obtainment of a program, and
the server apparatus includes:

10 a table holding unit operable to hold a table indicating a relation between a previously distributed program and a terminal ID,
after receiving the program obtainment request; and

 a decision unit operable to decide, by referring to the table, whether or not to distribute a program in response to a program obtainment request attached with the terminal ID, transmitted from the information processing terminal.

15 11. The program management system according to Claim 10,
 wherein the information processing terminal includes a storage unit operable to i) store a specific key which is different for each information processing terminal, in a memory that cannot be
20 re-written externally, and ii) encrypt, using the specific key, the program obtained from the server apparatus and store the encrypted program in the memory within the information processing terminal.

25 12. The program management system according to Claim 10,
 wherein the program includes a program body running on the information processing terminal, a program header storing information regarding the program body, program specific information for running the program body, and a specific information header storing information regarding the program specific information,

 the information processing terminal sends, to the server

apparatus, a header obtainment request for obtaining the program header and the specific information header included in the program for which obtainment is requested,

5 the server apparatus distributes the program header and the specific information header to the information processing terminal in the case where it is decided by the decision unit that the program body can be distributed, and

10 the information processing terminal i) includes a verification unit operable to perform a verification based on the program header and the specific information header, and ii) transmits the program obtainment request to the server apparatus after the verification is performed by the verification unit.

13. The program management system according to Claim 12,
15 wherein the program header contains an identifier capable of uniquely identifying the program, and

20 the information processing terminal includes another verification unit operable to decrypt, using the specific key, the program encrypted with the specific key, and verify, using the identifier, whether encryption with the specific key is performed correctly, said program being stored in the memory within the information processing terminal.

14. The program management system according to Claim 12,
25 wherein the program, the program header, the program specific information, and the specific information header, are attached with a digital signature.

15. The program management system according to Claim 12,
30 wherein the program header contains an identifier capable of uniquely identifying the program, and
the specific information header contains an identifier capable

of uniquely identifying the program specific information.

16. A program distribution method for an information processing terminal holding a terminal ID that cannot be re-written externally, and a server apparatus, connected via a network to the information processing terminal, that holds a program running on the information processing terminal, the method comprising:

5 a step of transmitting, to the server apparatus, a program obtainment request attached with the terminal ID when requesting 10 for obtainment of a program, the step being executed by the information processing terminal;

15 a table holding step of holding a table indicating a relation between a previously distributed program and a terminal ID, after receiving the program obtainment request, the table holding step being executed by the server apparatus; and

20 a decision step of deciding, by referring to the table, whether or not to distribute a program in response to a program obtainment request attached with the terminal ID, transmitted from the information processing terminal, the decision step being executed by the server apparatus.

17. A server program used in a server apparatus, connected via a network to an information processing terminal holding a terminal ID that cannot be re-written externally, that holds a program running 25 on the information processing terminal, the server program causing a computer to execute:

a table holding step of holding a table indicating a relation between a previously distributed program and a terminal ID; and

30 a decision step of deciding, by referring to the table, whether or not to distribute a program in response to a program obtainment request attached with the terminal ID, transmitted from the information processing terminal.